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Draft 03/16/2006

RUBIDOUX COMMUNITY SERVICES DISTRICT
2005 URBAN WATER MANAGEMENT PLAN

MARCH 2006

Prepared by

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CLIENT
2005 URBAN WATER MANAGEMENT PLAN
CONTACT SHEET

Date plan submitted to the Department of Water Resources: _____

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The Water supplier is a: **Community Services District**

The Water supplier is a: **Retailer**

Utility services provided by the water supplier include: **Water Supply, Sewage Collection**

Is This Agency a Bureau of Reclamation Contractor? **No**

Is This Agency a State Water Project Contractor? **No**

SECTION I
PUBLIC PARTICIPATION

A. PUBLIC PARTICIPATION

Law

> 10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published … After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

1. General

The Rubidoux Community Services District (RCSD, or the District) has actively encouraged community participation in its urban water management planning efforts since the first plan was developed in 1985. Public meetings were held on the 1985, 1990, 1995, 2000 and 2005 plans.

On [date], the District held a Public Hearing to receive comments on its draft Urban Water Management Plan. All comments received prior to and during the Public Hearing were taken into consideration in the preparation of the final report. Comments submitted and RCSD's responses to them are incorporated into Appendix F.

2. Plan Adoption

The Rubidoux Community Services District prepared this update of its Urban Water Management Plan during Summer 2005. The updated plan was adopted by the District Board of Directors in [month/year] and submitted to the California Department of Water Resources within 30 days of Board adoption. Attached to the cover letter addressed to the Department of Water Resources and as Appendix B are copies of the signed Resolution Adopting the 2005 Urban Water Management Plan. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

B. AGENCY COORDINATION

Law

> 10620(d)(2). Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

1. Coordination Within the District and Interagency Coordination

RCSD's service area is located within the service area of the Western Municipal Water District (WMWD or Western). WMWD has prepared its own Plan for 2005, which was adopted December 7, 2005. Krieger & Stewart coordinated the development of this plan with WMWD.

Table 1 summarizes the efforts RCSD has taken to include various agencies and citizens in its planning process.

Table 1
Coordination with Appropriate Agencies

Entities	Participated in UWMP development	Commented on the draft	Attended public meetings	Contacted for assistance	Sent copy of draft	Sent notice of intention to adopt	Not involved / No Information
WMWD	X				X	X	
City of Riverside					X	X	
West Valley Water District					X	X	
Jurupa Community Services District					X	X	
General Public			X			X	

C. SUPPLIER SERVICE AREA

Law

> 10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:
>
> > 10631(a). Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected

> population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

1. Formation and Purpose

The District was organized in 1952 in accordance with the State of California Community Services District Law (Government Code Section 60000 et seq.) for the purpose of providing certain public services, including domestic water service. The District is empowered to manage water resources and to construct, operate, maintain, repair, and replace water system facilities as needed to provide water service in compliance with applicable standards and regulations. The District routinely constructs new facilities, maintains them, and replaces them as necessary to maintain adequate, reliable, and safe water service to its customers.

2. Service Area

The District is a multi-county community services district, predominantly serving Riverside County, California, with approximately 120 acres in San Bernardino County. The District is located approximately 50 miles east of Los Angeles, and is bounded by San Bernardino County on the north, the Jurupa Mountains and Pedley Hills on the northwest, unincorporated areas of Jurupa on the west, the Santa Ana River on the South, and the City of Riverside on the east. The District's current boundaries, which are shown in Figure 1, encompass an area of approximately 7.5 square miles. Ground surface elevations within the District range from approximately 760 feet to 1,250 feet above sea level.

3. Climate

Rubidoux is located within the South Coast Air Basin. The basin is a 6,600 square mile area bounded by the Pacific Ocean to the west, and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.

Temperatures in the area vary between highs in excess of 100 °F during summer months and lows below 40 °F during winter months. Annual rainfall averages 10 inches, with most precipitation occurring between November and April; however, short duration thundershowers do sometimes occur during the summer.

The maximum and minimum monthly average temperatures, as well as monthly average evapotranspiration rates (ETo) are shown in Table 2 below.

Table 2
Climate

	Jan	Feb	Mar	Apr	May	June	
Standard Monthly Average ETo (inches)	2.49	2.91	4.16	5.27	5.94	6.56	
Average Rainfall (inches)	2.22	2.21	1.74	0.80	0.23	0.07	
Average Maximum Temperature (°F)	66.4	67.8	70.0	75.0	79.4	86.5	
Average Minimum Temperature (°F)	41.6	43.2	44.9	47.8	52.5	56.2	
	July	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Annual**
Standard Monthly Average ETo (inches)	7.22	6.92	5.35	4.05	2.94	2.56	56.37
Average Rainfall (inches)	0.04	0.12	0.26	0.32	0.93	1.23	10.18
Average Maximum Temperature (°F)	93.8	94.3	90.4	82.3	73.1	67.4	78.9
Average Minimum Temperature (°F)	60.4	61.1	58.4	52.3	45.1	41.2	50.4

NOTE: Rainfall and temperature data were obtained from the Riverside Citrus Experiment Station, as provided on the National Weather Service Western Regional Climate Center website at http://www.wrcc.dri.edu for the period of record July 1, 1948 to September 30, 2005. Evapotranspiration (ETo) data were obtained from the U.C. Riverside Station as provided on the CIMIS website at http://wwwcimis.water.ca.gov, as of February 2, 2006. Copies of the downloaded data are provided in Appendix C.

4. Population

Current and projected populations are set forth in Table 3. As shown therein, the District's service area population is projected to increase from approximately 31,500 in 2005 to approximately 56,400 by 2030. Population estimates and projections are based on the following:

The 2005, 2010, 2015, 2020, 2025, 2030 estimates (31,465, 34,863, 41,194, 47,042, 51,902, and 56,448, respectively) are based on the Southern California Association of Governments (SCAG) 2000 data and projections assuming the District's population

equals 100% of Census Tracts 40202, 40203, and 40204; 97% of Census Tract 40302, 96% of Census Tract 40201, 92% of Census Tract 40301, and 15% of Census Tract 40100.

Table 3 shows the population total for the District in 2005, with projections to 2030.

Table 3
Population – Current and Projected

	2005	2010	2015	2020	2025	2030
Service Area Population	31,500	34,900	41,200	47,000	51,900	56,400

Current and projected population data were provided by Southern California Association of Governments (SCAG), 2005.

5. Past Drought, Water Demand, and Conservation Information

The local region experienced a prolonged drought from 1987 through 1992. However, the drought had an insignificant effect on the District's groundwater supply, and did not directly result in any water shortages.

From 2000 to 2005, the population increased by 4,800 full-year residents, to a current population of approximately 31,500, and new water demand has kept pace with the growth, increasing an average of 264 AF/year during the same period. The District continues to have a modest but growing industrial sector.

The citizens of Rubidoux have a high commitment to quality of life and environmental issues and are active participants in resource and planning discussions held by District staff and the District Board of Directors. Water conservation is one of several high priority policies actively implemented in the District, and programs such as residential water audits, ultra-low-flush toilet replacements, and landscape water audits are well accepted.

SECTION II
WATER SOURCES (SUPPLY)

Law

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

10631(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments...[to 20 years or as far as data is available.]

10631(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

10631(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of section 10635.

10631(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

A. WATER SUPPLY SOURCES

The District currently extracts groundwater from the Riverside South Ground Water Basin. In addition, the District has connections with Jurupa Community Services District (JCSD) and West Valley Water District (WVWD—formerly formerly West San Bernardino County Water District) to obtain water in emergencies.

Table 4
Current and Projected Water Supplies—AF/YR

Water Supply Sources	2005	2010	2015	2020	2025	2030
Imported from WMWD	0	0	0	0	0	0
District Groundwater Production Capacity	12,000	12,000	12,000	12,000	12,000	12,000
Transfers	0	0	0	0	0	0
Recycled Water	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	12,000	12,000	12,000	12,000	12,000	12,000

B. GROUND WATER

All of the District's potable water supply is obtained from extraction wells located within the District boundary, aside from emergency water supplies delivered through the District's interconnection with JCSD. The District's wells extract water from that portion of the Riverside Basin lying within Riverside County, known as the Riverside South Ground Water Basin. The Riverside South Ground Water Basin is not an adjudicated basin, nor is it considered by the Department of Water Resources (DWR) to be in overdraft. The District's production increased from approximately 700 AF in the early 1960s to 1,870 AF in 1970, to 5,010 AF in 1990, and to approximately 6,400 AF in 2005.

An ample ground water supply is available to the District. In many areas, ground water levels are within 20 feet of the ground surface. Within the last 10 years there has been no evidence of a significant increase in the depth of groundwater, although laboratory analyses have shown increasing nitrate concentrations in some District wells.

The District removed Wells 3 and 4 from active service because both were producing water containing nitrate concentrations exceeding the maximum contaminant level (MCL) of 45 milligrams per liter (mg/l); both wells are located in the northerly portion of the District, northerly of State Highway 60. In late 1995, the 3,000 gpm Anita B. Smith Water Treatment Facility was constructed to reduce the nitrate concentration of water produced by Wells 4 and 6. Well 3 is now used for construction water only.

Water produced by District Wells 1 and 5 contained manganese in excess of the secondary MCL of 0.05 mg/L. Therefore, in 1996, the District constructed the 500 gpm LaVerne J. Mahnke Manganese Treatment Facility, which currently removes manganese from water produced by Well 17, which was constructed in mid-2000. (Well 1 was destroyed in 2002, and Well 5 is currently on standby.) Treated water is then blended with water produced by Wells 2 and 8 to produce blended water with manganese concentrations less than the secondary MCL. Well 8, with a capacity of 1,800 gpm, was constructed in 1998. In 2003, the manganese treatment facility was expanded to its maximum capacity of 3,000 gpm.

Currently, the District's active domestic water supply wells are: Well 2 (800 gpm); Well 4 (1,200 gpm); Well 6 (2,000 gpm); Well 8 (1,800 gpm); and Well 17 (2,200 gpm), with a combined

capacity of 8,000 gpm (approximately 12,900 AF/YR if all sources are operated continuously). The District also operates Well 3 (300 gpm) and Well 7 (300 gpm), as needed, for construction water only; Well 11 (900 gpm) to produce non-potable irrigation water for the Jurupa Hills Golf Course; and Well 14 (400 gpm) for additional sources of irrigation water.

Table 5
Amount of Groundwater Pumped – AF/YR

Basin Name(s)	2000	2001	2002	2003	2004	2005
Riverside South Ground Water Basin	5,077.8	6,338.3	5,940.5	5,914.7	6,355.2	6,398
% of Total Water Supply	100	100	100	100	100	100

Table 6
Amount of Groundwater Projected to be Pumped – AF/YR

Basin Name(s)	2010	2015	2020	2025	2030
Riverside South Ground Water Basin	6,990	7,689	8,458	9,304	10,235
% of Total Water Supply	100	100	100	100	100

C. IMPORTED WATER

There are no facilities available to convey State Water Project water to the District. The closest source of State Water Project water is MWD's Mills Water Treatment Plant, which is located in the City of Riverside. In order to take deliveries therefrom, the District would have to construct a 44,000-foot transmission pipeline to convey water from the Mills Treatment Plant to the District boundary. In a September 1979 report prepared for WMWD entitled "Distribution of State Project Water from the Mills Filtration Plant", it was proposed that both the District and JCSD participate in construction of transmission facilities to convey State Project Water from the Metropolitan Water District Mills Filtration Plant to each entity; however, due to the length of the required transmission facilities, costs associated with this proposal would be substantial and difficult to justify.

One alternative for the District to receive imported water would be for the District to enter into an agreement with the City of Riverside to exchange treated State Water Project water purchased from WMWD for groundwater extracted by the City of Riverside; however, negotiations to enter such an agreement have never been initiated. In order to accomplish an exchange, the District

would have to construct conveyance facilities to convey additional treated State Water Project water to the City of Riverside, as well as exchanged City of Riverside water to the District. It has been determined by the District, however, that this alternative is not cost feasible.

D. WATER EXCHANGES/TRANSFERS

The District has not entered any water exchange or transfer agreements. The District currently has an 800 gpm emergency interconnection with JCSD, which is located westerly of the District, and one million gallons per day (MGD) is available to RCSD in the event of an emergency. The District has recently removed another 800 gpm interconnection with West Valley Water District (WVWD), which is located northerly of the District, within San Bernardino County. The interconnection with WVWD was a temporary, aboveground connection, and can be easily reconnected in the event of an emergency, from which 1 MGD would be available to RCSD. These emergency interconnections are currently intended as a means by which the District can receive water during emergency or peak summer periods. Additionally, interruptible water service has been provided to JCSD, as needed, upon JCSD's request, from the Hunter and Atkinson pressure zones. The District is currently reviewing plans to enlarge the interconnections with both JCSD and WVWD in the near future in order to permit the sale of surplus water to WVWD. Currently, the District does not have interconnections with the City of Riverside, which is located on the opposite side of the Santa Ana River, southeast of the District.

One alternative for acquisition of additional water supplies would be an exchange agreement with the City of Riverside by which the District would purchase State Water Project water from WMWD at the Metropolitan Water District Mills Filtration Plant and provide all necessary conveyance facilities to deliver said water to the City of Riverside. In exchange for the State Water Project water provided by the District, the City of Riverside would provide exchange water to the District's system. As noted previously, the District would have to construct additional conveyance facilities for both itself and the City of Riverside in order to implement this alternative; therefore, this alternative has been deemed cost infeasible.

Table 7
Transfer and Exchange Opportunities – AF/YR

Source Transfer Agency	Transfer or Exchange	Short Term	Proposed Quantities	Long Term	Proposed Quantities
JCSD	Transfer	Yes	275	Yes	1,120
Total	---				

E. RECYCLED WATER

Pursuant to an agreement with the City of Riverside to provide advanced wastewater treatment dated December 1, 1976, and a subsequent agreement with the City of Riverside to provide primary and secondary wastewater treatment dated May 4, 1978, the District has discontinued treatment of the wastewater it collects from within its service area. All wastewater collected by the District is conveyed through regional wastewater conveyance facilities (trunk sewer, lift station, and force main) to the City of Riverside Regional Wastewater Treatment Plant. Since said facility is located downstream of the District and on the opposite side of the Santa Ana River, it is not currently possible to purvey reclaimed water within the District's boundary. Construction of conveyance facilities to convey the reclaimed water back to RCSD's service area has been determined to be cost prohibitive.

F. DESALINATED WATER

There are currently no opportunities for desalinated water as a water source in RCSD's service area. There is no brackish water in the area.

G. FUTURE WATER SUPPLY PROJECTS

The construction of additional emergency interconnections with JCSD and WVWD is currently in the planning stages. Once constructed, said emergency interconnections will provide a source of potable water in addition to RCSD's local groundwater production and existing interconnection with JCSD.

SECTION III
RELIABILITY PLANNING

Law

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

> 10631(c). Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (1) An average water year, (2) A single dry water year, (3) Multiple dry water years.
>
> 10631(c). For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

10632. The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

> 10632(b). An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

A. RELIABILITY

Factors that can cause water supply shortages are earthquakes, floods, and energy outages at treatment and pumping facilities. RCSD includes the probability of catastrophic outages when using the reliability planning approach.

Reliability planning requires information about: (1) the expected frequency and severity of shortages; (2) how additional water management measures are likely to affect the frequency and severity of shortages; (3) how available contingency measures can reduce the impact of shortages when they occur.

RCSD's goal is to provide its customers with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible manner.

B. FREQUENCY AND MAGNITUDE OF SUPPLY DEFICIENCIES

Although Southern California has experienced serious droughts during the past twenty years, RCSD has not experienced an actual supply deficiency.

The current and future supply projections through 2030 are shown in Table 4.

C. PLANS TO ASSURE A RELIABLE WATER SUPPLY

In the future, the District will continue to be reliant on local groundwater supplies. The District has emergency interconnections with JCSD to provide lifeline water service in the case of catastrophic outages, and an expansion of said interconnections is in the planning stages. A temporary emergency interconnection with WVWD, which was recently removed, can be reconnected in the event of an emergency.

D. RELIABILITY COMPARISON

Table 8 details estimated water supply projections associated with several water supply reliability scenarios. For further information on the data, see Three-year Minimum Water Supply and Water Shortage Contingency Plan sections.

Table 8
Supply Reliability – AF/YR

Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
Groundwater	12,000	12,000	12,000	12,000	12,000
% of Normal	100%	100%	100%	100%	100%

Table 9 Basis of Water Year Data		
Water Year Type	Base Year(s)	Hist. Sequence
Normal Water Year	2004	2000-2004
Single-Dry Water Year	2003	
Multiple-Dry Water Years	2000-2003	

E. FACTORS RESULTING IN INCONSISTENCY OF SUPPLY

RCSD does not anticipate any inconsistency in supply due to legal, environmental, water quality, or climate factors. In the event that RCSD's ground water source is not available at a consistent level of use, RCSD can obtain supplemental or replacement water through emergency interconnections with JCSD and WVWD at up to 1 MGD from each.

F. THREE YEAR MINIMUM WATER SUPPLY

The District has never experienced an actual water supply deficiency. The District's sole water source is ground water.

Table 10 Three-Year Estimated Minimum Water Supply – AF/YR				
Source	**Year 1**	**Year 2**	**Year 3**	**Normal**
Riverside South Ground Water Basin	12,000	12,000	12,000	12,000
Total	12,000	12,000	12,000	12,000

F. TRANSFER OR EXCHANGE OPPORTUNITIES

1. Water Transfers

Law

> 10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:
>
> 10631 (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

The District has not entered any water exchange or transfer agreements. The District's existing 800 gpm interconnection with JCSD, (located westerly of the District) is intended as a means by

which the District can receive water during emergency or peak summer periods. In the event of an emergency, the District can reconnect a temporary, above ground 800 gpm interconnection with WVWD (located northerly of the District within San Bernardino County). In the event that the District required additional water during emergency or peak summer periods, one MGD would be available from each JCSD and WVWD. The District currently provides interruptible water service to JCSD, as needed, upon JCSD's request, from the District's Hunter and Atkinson pressure zones.

Currently, the District does not have interconnections with the City of Riverside, which is located on the opposite side of the Santa Ana River, southeasterly of the District. As discussed previously, one alternative for acquisition of additional water supplies would be an exchange agreement with the City of Riverside by which the District would purchase State Water Project water from WMWD at the Metropolitan Water District Mills Filtration Plant and provide all necessary conveyance facilities to deliver said water to the City of Riverside. In exchange for the State Water Project water provided by the District, the City of Riverside would provide exchange water to the District's system. As noted previously, the District would have to construct additional conveyance facilities for both itself and the City of Riverside in order to implement this alternative. This alternative, however, has been deemed cost prohibitive by the District.

SECTION IV
WATER USE PROVISIONS

Law

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

10631(e)(1). Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:

(A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; and (I) Agricultural.

10631(e) (2) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

A. PAST, CURRENT, AND PROJECTED WATER USE

Historic and projected annual water production requirements are also set forth in Tables 5 and 6. Table 11 illustrates Past, Current, and Projected Water Use for the years 2000 - 2030 in acre-feet per year. As shown therein, the average annual water production is projected to increase from 5,900 AF presently to approximately 10,235 AF in 2030. District projections are based on data from the District's 1999 Water Master Plan, with the assumption of a uniform 1.3% increase per year in water production between 1995 and 2020. Unaccounted-for water averages about 10% of total production (unaccounted-for water is the difference between production meter records and customer meter records, and includes water attributed to construction, line flushing, theft, and leakage, as well as inaccuracies of production and consumption meters).

Table 11 Past, Current, and Projected Water Deliveries								
Year	***Metered/ Unmetered**	**Water Use Sectors**	**Single Family**	**Multi-Family**	**Commercial/ Industrial/ Institutional**	**Land-scape**	**Agri-cultural**	**Total**
2000	Metered	# of Accounts	5,610	775	315	5	0	6,705
		Deliveries AF/YR	4,392	769	329	20	0	5,510
2005	Metered	# of Accounts	5,677	775	437	5	0	6,894
		Deliveries AF/YR	3,931	687	1760	20	0	6,398
2010	Metered	# of Accounts	5,692	785	459	10	0	6,946
		Deliveries AF/YR	4,554	746	1836	30	0	7,166
2015	Metered	# of Accounts	6,262	795	482	15	0	7,554
		Deliveries AF/YR	5,010	755	1928	40	0	7,733
2020	Metered	# of Accounts	6,577	805	506	20	0	7,908
		Deliveries AF/YR	5,262	765	2024	50	0	8,101
2025	Metered	# of Accounts	6,906	815	531	20	0	8,272
		Deliveries AF/YR	5,525	774	2124	50	0	8,473
2030	Metered	# of Accounts	7,251	825	558	20	0	8,654
		Deliveries AF/YR	5,801	784	2232	50	0	8,867

****All of the District's connections are metered.***

Table 12 Sales to Other Agencies – AF/YR							
Water Distributed	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
JCSD	460	1,120	1,120	1,120	1,120	1,250	1,350
Total	460	1,120	1,120	1,120	1,120	1,250	1,350

Table 13 Additional Water Uses and Losses – AF/YR							
Water Use	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Unaccounted-for System Losses	610	512	640	696	752	808	864
Saline Barriers	0	0	0	0	0	0	0
Groundwater Recharge	0	0	0	0	0	0	0
Conjunctive Use	0	0	0	0	0	0	0
Raw Water	0	0	0	0	0	0	0
Recycled	0	0	0	0	0	0	0
Total	610	512	640	696	752	808	864

Table 14 Total Water Use – AF/YR							
Water Distributed	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Sum of Tables 12, 13, 14	6,580	8,030	8,926	9,549	9,973	10,531	11,081

The District has been adding new connections at a rate of approximately 1% per year, but because of new plumbing efficiency standards, landscape guidelines, and other conservation programs, water demand has not matched the connection growth rate.

1. Residential Sector

Single-family and multi-family residential customers constitute approximately 94% of the District's customers. The residential sector is growing slowly but steadily each year, and some growth is expected to continue to occur over the next several years. Water efficiency improvements appear to be reducing residential water use.

2. Commercial Sector

The District has a complex mix of commercial customers, ranging from family restaurants, insurance offices, beauty shops, and gas stations to shopping centers and high-volume restaurants. The commercial sector is growing steadily each year, and some growth is expected to continue to occur over the next several years.

3. Industrial Sector

The District serves a small industrial sector, primarily centered on light manufacturing. The industrial sector has not grown much in the last decade or so, and is not expected to increase significantly over the next 25 years.

4. Institutional/Governmental Sector

The District has a stable institutional/governmental sector, comprised primarily of local government, parks, schools, and other types of public facilities. This sector is not expected to increase significantly over the next 25 years.

5. Landscape/Recreational Sector

Landscape and recreational customer demand is expected to increase gradually over the next 25 years. Increased efficiency and landscape conversions at existing facilities should help offset new demand resulting from projected increases in this sector over the next 25 years.

B. WATER QUALITY IMPACTS ON RELIABILITY

Law

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Some District wells have increasing concentrations of nitrate or manganese. Water produced by these wells is treated as necessary and then blended prior to entering the system so that only water meeting all state and federal water quality standards is distributed through the system. There are no foreseeable changes in supply reliability due to water quality.

SECTION V
SUPPLY AND DEMAND COMPARISON PROVISIONS

Law

10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from the state, regional or local agency population projections within the service area of the urban water supplier.

Table 15
Projected Normal Water Year Supply – AF/YR

	2010	2015	2020	2025	2030
Supply	15,000	15,000	15,000	17,500	17,500
% of Normal Year	100%	100%	100%	100%	100%

Table 16
Projected Normal Water Year Demand – AF/YR

	2010	2015	2020	2025	2030
Demand	9,120	9,820	10,520	11,220	11,920
% of Year 2005	100%	100%	100%	100%	100%

Table 17
Projected Normal Year Supply and Demand Comparison – AF/YR

	2010	2015	2020	2025	2030
Supply totals	15,000	15,000	15,000	17,500	17,500
Demand totals	9,120	9,820	10,520	11,220	11,920
Difference (supply minus demand)	5,880	5,180	4,480	6,280	5,580
Difference as % of Supply	39.2%	34.5%	29.9%	36%	32%
Difference as % of Demand	64.5%	52.7%	42.6%	56%	47%

Table 18 Projected Single Dry Year Water Supply – AF/YR					
	2010	**2015**	**2020**	**2025**	**2030**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 19 Projected Single Dry Year Water Demand – AF/YR					
	2010	**2015**	**2020**	**2025**	**2030**
Demand	6,990	7,689	8,458	9,304	10,235
% of Projected Normal	77%	78%	80%	83%	86%

Table 20 Projected Single Dry Year Supply and Demand Comparison – AF/YR					
	2010	**2015**	**2020**	**2025**	**2030**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	6,990	7,689	8,458	9,304	10,235
Difference (supply less demand)	5,010	4,311	3,542	2,696	1,765
Difference as % of Supply	42%	36%	30%	22%	15%
Difference as % of Demand	72%	56%	42%	29%	17%

Table 21 Projected Supply During Multiple Dry Year Period Ending in 2010 – AF/YR					
	2006	**2007**	**2008**	**2009**	**2010**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 22 Projected Demand Multiple Dry Year Period Ending in 2010 – AF/YR					
	2006	**2007**	**2008**	**2009**	**2010**
Demand	6,482	6,609	6,736	6,863	6,990
% of Projected Normal	93%	88%	84%	80%	77%

Table 23 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2010 –AF/YR					
	2006	**2007**	**2008**	**2009**	**2010**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	6,482	6,609	6,736	6,863	6,990
Difference (supply minus demand)	5,518	5,391	5,264	5,137	5,010
Difference as % of Supply	46%	45%	44%	43%	42%
Difference as % of Demand	85%	82%	78%	75%	72%

Table 24 Projected Supply During Multiple Dry Year Period Ending in 2015 – AF/YR					
	2011	**2012**	**2013**	**2014**	**2015**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 25 Projected Demand Multiple Dry Year Period Ending in 2015 – AF/YR					
	2011	**2012**	**2013**	**2014**	**2015**
Demand	7,130	7,270	7,409	7,549	7,689
% of Projected Normal	77%	77%	78%	78%	78%

Table 26 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2015 –AF/YR					
	2011	**2012**	**2013**	**2014**	**2015**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	7,130	7,270	7,409	7,549	7,689
Difference (supply minus demand)	4,870	4,730	4,591	4,451	4,311
Difference as % of Supply	41%	39%	38%	37%	36%
Difference as % of Demand	68%	65%	62%	59%	56%

Table 27 Projected Supply During Multiple Dry Year Period Ending in 2020 - AF/YR					
	2016	**2017**	**2018**	**2019**	**2020**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 28 Projected Demand Multiple Dry Year Period Ending in 2020 – AF/YR					
	2016	**2017**	**2018**	**2019**	**2020**
Demand	7,843	7,997	8,150	8,304	8,458
% of Projected Normal	79%	79%	80%	80%	80%

Table 29 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2020 –AF/YR					
	2016	**2017**	**2018**	**2019**	**2020**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	7,843	7,997	8,150	8,304	8,458
Difference (supply minus demand)	4,157	4,003	3,850	3,696	3,542
Difference as % of Supply	35%	33%	32%	31%	30%
Difference as % of Demand	53%	50%	47%	45%	42%

Table 30 Projected Supply During Multiple Dry Year Period Ending in 2025 - AF/YR					
	2021	**2022**	**2023**	**2024**	**2025**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 31 Projected Demand During Multiple Dry Year Period Ending in 2025 - AF/YR					
	2021	**2022**	**2023**	**2024**	**2025**
Demand	8,627	8,796	8,966	9,135	9,304
% of Projected Normal	81%	81%	82%	82%	83%

Table 32 Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2025 –AF/YR					
	2021	**2022**	**2023**	**2024**	**2025**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	8,627	8,796	8,966	9,135	9,304
Difference (supply minus demand)	3,373	3,204	3,034	2,865	2,696
Difference as % of Supply	28%	27%	25%	24%	22%

Difference as % of Demand	39%	36%	34%	31%	29%

Table 33 **Projected Supply During Multiple Dry Year Period Ending in 2030 - AF/YR**					
	2026	**2027**	**2028**	**2029**	**2030**
Supply	12,000	12,000	12,000	12,000	12,000
% of Projected Normal	80%	80%	80%	69%	69%

Table 34 **Projected Demand During Multiple Dry Year Period Ending in 2030 - AF/YR**					
	2026	**2027**	**2028**	**2029**	**2030**
Demand	9,490	9,676	9,863	10,049	10,235
% of Projected Normal	84%	84%	85%	85%	86%

Table 35 **Projected Supply & Demand Comparison During Multiple Dry Year Period Ending in 2030 – AF/YR**					
	2026	**2027**	**2028**	**2029**	**2030**
Supply totals	12,000	12,000	12,000	12,000	12,000
Demand totals	9,490	9,676	9,863	10,049	10,235
Difference (supply minus demand)	2,510	2,324	2,137	1,951	1,765
Difference as % of Supply	21%	19%	18%	16%	15%
Difference as % of Demand	26%	24%	22%	19%	17%

SECTION VI
WATER DEMAND MANAGEMENT MEASURES

Law

> 10631(f). Provide a description of the supplier's water demand management measures. This description shall include all of the following: (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:……..
>
> 10631(g). An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies.

RCSD is committed to implementing water conservation and water recycling programs. This Section discusses water conservation. In accordance with the passage of SB553, this section is organized according to the 14 Best Management Practices (BMPs) of the California Urban Water Conservation Council (CUWCC).

RCSD is a signatory to the Memorandum of Understanding regarding Urban Water Conservation in California (MOU), and is therefore a member of the California Urban Water Conservation Council (CUWCC). Descriptions of RCSD's water conservation programs are described below.

BMP 1 – Water Survey Programs for Single-Family and Multi-Family Residential Customers

IMPLEMENTATION DESCRIPTION: In concert with WMWD, RCSD provides any support possible to local water users in conducting water audits and surveys on their property.

IMPLEMENTATION SCHEDULE: RCSD will continue to implement this BMP with the assistance of WMWD.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET: RCSD's role in this BMP is to facilitate implementation by WMWD.

(A) Water Survey Programs for Single-Family Residential and Multifamily Residential Customers					
Table A1-Actual	2001	2002	2003	2004	2005 (proj)
# of single family surveys					
# of multi-family surveys					
Actual expenditures - $					
Actual water savings – AF/YR					

BMP 2 – Residential Plumbing Retrofit

IMPLEMENTATION DESCRIPTION: The District cooperates and coordinates with its customers, the County, and WMWD to encourage retrofit of existing industrial, commercial, and residential connections with water saving devices, such as ULF toilets, LF shower heads, and faucet aerators. Other measures may also be encouraged, such as insulating hot water heaters upon replacement and limiting sale of appliances within County limits to water efficient models.

In concert with WMWD, RCSD also works with the local planning department of the County of Riverside to assure enforcement of the ultra-low-flush toilet installation requirements for new construction, and supports the prohibition of sale of toilets using more than 1.6 gallons per flush.

IMPLEMENTATION SCHEDULE: WMWD and the County of Riverside will continue to implement this BMP, and RCSD will assist in its implementation within the RCSD service area.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET: Proposed annual budget: See BMP 1.

(B) Residential Plumbing Retrofit					
Table B1-Actual	1992-2001	2002	2003	2004	2005 (proj)
# of single family devices					
# of multi-family devices					
Actual expenditures - $					
Actual water savings – AF/YR					

BMP 3 -- System Water Audits, Leak Detection, and Repair

IMPLEMENTATION DESCRIPTION: RCSD has conducted water audits and leak detection and repair, as described in its 1995 Urban Water Management Plan. The District has also implemented a meter calibration or replacement program. At present, meters 2" and smaller are repaired or replaced on an "as-needed" basis; that is, meters are only calibrated or replaced when they are found to be operating incorrectly. Only gross problems are usually detected. Defective meters are usually found by the meter reading or customer service departments. The meter reader reports any observable defective meter, while the customer service department compares consumption histories.

IMPLEMENTATION SCHEDULE: RCSD monitors/audits water loss in its distribution system on a monthly basis.

METHODS TO EVALUATE EFFECTIVENESS: Monthly analysis of water produced versus water delivered is conducted providing a monthly audit of losses. RCSD maintains a distribution system water loss factor of less than 10%.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET: Proposed annual budget. See BMP 1.

(C) System Water Audits, Leak Detection, and Repair					
Table C1-Actual	2001	2002	2003	2004	2005 (proj)
% of unaccounted water					
Miles of distribution lines surveyed					
Miles of lines repaired					
Actual expenditures - $					
Actual water savings – AF/YR					

BMP 4 -- Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

IMPLEMENTATION DESCRIPTION: All deliveries by RCSD are metered deliveries, using commodity rate components.

IMPLEMENTATION SCHEDULE: Not applicable.

METHODS TO EVALUATE EFFECTIVENESS: Not applicable.

CONSERVATION SAVINGS: Not applicable.

BUDGET: Not applicable.

BMP 5 -- Large Landscape Conservation Programs and Incentives

IMPLEMENTATION DESCRIPTION: The County of Riverside has adopted a low water consumption ordinance; said ordinance, includes the following measures:

- Review of landscape and irrigation system designs for major commercial, government, and industrial projects to ensure the use of water efficient planting and irrigation practices.

- Implementation and enforcement of a sprinkler overspray control program for private and public lands to prevent discharge to impermeable surfaces. Corrective measures consist of verbal requests to individual operators, followed by a fine for failure to correct.

- A reporting system to limit instances of water running to waste in streets. Corrective measures consist of verbal requests to individual operators, followed by a fine for failure to correct.

The District has assisted the County in enforcing the low water consumption ordinance, particularly by responding to reported or observed violations and educating and assisting the user in corrective action.

IMPLEMENTATION SCHEDULE and METHODS TO EVALUATE EFFECTIVENESS: Quarterly and annual reports are submitted to RCSD, WMWD and Metropolitan by the landscape architect in charge of the project.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* Proposed annual budget. See BMP 1.

(D) Large Landscape Conservation Programs and Incentives					
Table E1-Actual	2001	2002	2003	2004	2005 (proj)
# of budgets developed					
# of surveys completed					
# of follow-up visits					
Actual expenditures - $					
Actual water savings – AF/YR					

BMP 6 – High-Efficiency Washing Machine Rebate Programs

IMPLEMENTATION DESCRIPTION: As of this date, this BMP has not been completely developed by the CUWCC.

IMPLEMENTATION SCHEDULE: RCSD will, in conjunction with WMWD and the CUWCC, support local, state and federal legislation to improve efficiency standards for washing machines.

METHODS TO EVALUATE EFFECTIVENESS: Not applicable at this point.

BUDGET: Unknown at this time but would be part of the water awareness program.

(E) High-efficiency Washing Machine Rebate Programs					
Table F1-Actual	2001	2002	2003	2004	2005 (proj)
$ per rebate					
# of rebates paid					
Actual expenditures - $					
Actual water savings – AF/YR					

(F) High-efficiency Washing Machine Rebate Programs					
Table F2-Planned	2006	2007	2008	2009	2010
$ per rebate					
# of rebates paid					
Actual expenditures - $					
Actual water savings – AF/YR					

BMP 7 -- Public Information Program

IMPLEMENTATION DESCRIPTION: The District participates in and conducts programs to educate residential and commercial customers of ways they can conserve and better manage water. Program implementation entails the following:

- Preparation of a District irrigation guide for distribution with utility bills.
- Promotion of water conservation by speaking to public groups regarding the importance of water conservation.
- Modification of water bills to show water use for the same month during the previous year.
- Distribution of pamphlets which include specific conservation practices, facts concerning state, local, residential, and individual water consumption statistics, and waste statistics.
- Issuing an annual water quality report that includes suggested conservation practices and water waste statistics.

The objective of the program is to encourage the District's customers to conserve water and to provide a means by which customers can measure the effectiveness of water conservation efforts.

On May 3, 1990, District board adopted Resolution No. 597, which enacted a program of voluntary water conservation with a goal of reducing water consumption by 10%. A copy of this

resolution is included in Appendix B. The resolution requests that all water users within the District service area take specific steps to conserve water.

IMPLEMENTATION SCHEDULE: RCSD will continue to provide public information services and materials to remind the public about water conservation and other resource issues.

METHODS TO EVALUATE EFFECTIVENESS: RCSD will track commentary regarding the information provided.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* Proposed annual budget. See BMP 1.

(G) Public Information Program					
Table G1-Actual	2001	2002	2003	2004	2005 (proj)
a. Paid Advertising					
b. Public Service Announcement					
c. Bill Inserts/Newsletters/Brochures					
d. Bill showing water usage in comparison to previous year's usage					
e. Demonstration Gardens					
f. Special Events, Media Events					
g. Speaker's Bureau					
h. Program to coordinate with other government agencies, industry and public interest groups and media					
Actual expenditures - $					

BMP 8 -- School Education Programs

IMPLEMENTATION DESCRIPTION: District staff have participated with WMWD and City of Riverside staff in water awareness activities for a number of years. Said activities have

included a water carnival, a water taste test, and a school water education program. The activities are designed to increase the public's consciousness with regard to water conservation.

IMPLEMENTATION SCHEDULE: RCSD will continue to implement this BMP whenever possible.

METHODS TO EVALUATE EFFECTIVENESS: RCSD will track the commentary regarding the information provided.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* Proposed annual budget. See BMP 1.

(H) School Education Programs						
		Number of classroom presentations				
Table H1-Actual	# of classes	2001	2002	2003	2004	2005 (proj)
Grades K-3rd						
Grades 4th – 6th						
Grades 7th – 8th						
High School						
Actual expenditures - $						

BMP 9 -- Conservation Programs for Commercial, Industrial, and Institutional Accounts

IMPLEMENTATION DESCRIPTION: RCSD has relatively light commercial and industrial water use within its boundaries. Local schools and churches within our distributing agencies' areas would qualify as institutional accounts. RCSD considers this BMP to be covered under the general conservation effort. With the cooperation of WMWD, RCSD will respond on request to commercial, industrial and institutional accounts with information and assistance regarding water conservation.

IMPLEMENTATION SCHEDULE: RCSD will continue to offer any programs made available by WMWD and Metropolitan to its customers.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP but believes that this program is in the public's interest.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* Proposed annual budget. See BMP 1.

(I) Conservation Programs for Commercial, Industrial, and Institutional Accounts					
Table I1-Actual	2001	2002	2003	2004	2005 (proj)
# of on-site surveys completed					
Was an incentive provided					
# of follow-up visits					
Actual expenditures - $					
Actual water savings – AF/YR					

(J) Conservation Programs for Commercial, Industrial, and Institutional Accounts					
Table I2-Planned	2006	2007	2008	2009	2010
# of on-site surveys to be completed					
Will incentives be provided?					
# of follow-up visits					
Projected expenditures - $					
Projected water savings – AF/YR					

(K) Conservation Programs for Commercial, Industrial, and Institutional Accounts					
Table I4-Actual	2001	2002	2003	2004	2005 (proj)
# of commercial replacements					
# of industrial replacements					
# of institutional replacements					
Actual expenditures - $					
Actual water savings – AF/YR					

(L) Conservation Programs for Commercial, Industrial, and Institutional Accounts					
Table I5-Planned	2006	2007	2008	2009	2010
# of commercial replacements					
# of industrial replacements					
# of institutional replacements					
Projected expenditures - $					
Projected water savings – AF/YR					

BMP 10 – Wholesale Agency Assistance Programs

IMPLEMENTATION DESCRIPTION: Not applicable to RCSD, which is a water retailer.

IMPLEMENTATION SCHEDULE: Not applicable.

METHODS TO EVALUATE EFFECTIVENESS: Not applicable.

CONSERVATION SAVINGS: Not applicable.

BUDGET*:* Not applicable.

BMP 11 -- Conservation Pricing

IMPLEMENTATION DESCRIPTION: The District meters all of its production and retail deliveries. The District has billed for water use on an ascending rate schedule since 1979 in order to discourage excessive consumption.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* None proposed.

BMP 12 – Conservation Coordinator.

IMPLEMENTATION DESCRIPTION: RCSD has designated the District Engineer as RCSD's water conservation coordinator. This is not a full-time position, but time is devoted to coordination and oversight of conservation programs, particularly with WMWD, MWD, and BMP implementations. The coordinator coordinates WMWD's and MWD's programs within RCSD.

IMPLEMENTATION SCHEDULE: Not applicable.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET*:* None proposed

BMP 13 -- Water Waste Prohibition

IMPLEMENTATION DESCRIPTION: Part 4, Section 3 of the District's Ordinance No. 38 prohibits consumers from permitting leaks or waste of water. To further clarify this prohibition, the District plans to adopt a "No-Waste" ordinance in May, 2002 (see Appendix C).

IMPLEMENTATION SCHEDULE: The District proposes to adopt the Ordinance in May, 2002, and to begin enforcement upon adoption.

METHODS TO EVALUATE EFFECTIVENESS: All citations and violations will be reported annually.

BUDGET: Enforcement costs will be included as part of the District's overhead.

IMPLEMENTATION DESCRIPTION: RCSD shall support measures prohibiting gutter flooding, single pass cooling systems in new connections, nonrecirculating systems in all new conveyer car wash and commercial laundry systems, and nonrecycling decorative water fountains.

- RCSD shall support efforts to develop state law regarding exchange-type water softeners that would:

- allow the sale of only more efficient, demand-initiated regenerating (DIR) models;

- develop minimum appliance efficiency standards that a) increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used; and b) implement an identified maximum number of gallons discharged per gallon of soft water produced;

- allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply;

- RCSD shall encourage including water softener checks in home water audit programs and will supply brochures, when available, that include information about DIR and exchange-type water softener.

IMPLEMENTATION SCHEDULE: RCSD will continue to implement this BMP.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET: None proposed.

(M) Water Waste Prohibition					
Table MI-Actual	2001	2002	2003	2004	2005 (proj)
Waste ordinance in effect					
# of on-site visits					
Water softener ordinance					
Actual expenditures - $					

BMP 14 – Residential ULFT Replacement Programs

IMPLEMENTATION DESCRIPTION: The District cooperates and coordinates with its customers, the County, and WMWD to encourage retrofit of existing industrial, commercial, and residential connections with water saving devices, such as ultra-low-flush (ULF) toilets, low-flow (LF) shower heads, and faucet aerators. Other measures may also be encouraged, such as insulating hot water heaters upon replacement and limiting sale of appliances within County limits to water efficient models.

IMPLEMENTATION SCHEDULE: WMWD will continue to implement this BMP, and RCSD will assist in its implementation within the RCSD service area.

METHODS TO EVALUATE EFFECTIVENESS: RCSD has no method to evaluate the effectiveness of this BMP.

CONSERVATION SAVINGS: RCSD has no method to quantify the savings of this BMP but believes that this program is in the public's interest.

BUDGET: See WMWD's Plan.

(N) Residential Ultra-Low-Flush Toilet Replacement Programs Year Single-Family Program Started _____					
Table NI-Actual	2001	2002	2003	2004	2005 (proj)
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
Actual expenditures - $					
Actual Water Savings – AF/YR					

(O) Residential Ultra-Low-Flush Toilet Replacement Programs Year Multi-Family Program Started _____					
Table N2-Actual	2001	2002	2003	2004	2005 (proj)
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
Actual expenditures - $					
Actual Water Savings – AF/YR					

B. Evaluation of Water Demand Management Measures Not Implemented

Section of 10631(g) of the Water Code requires an evaluation of any of the 14 Water Demand Management Measures (DMMs), also known as Best Management Practices (BMPs) that have not been implemented or scheduled for implementation.

The following BMPs are those that are not currently implemented or scheduled to be implemented by the District:

1. BMP 6: High Efficiency Washing Machine Rebate Program
   At the time of the 2000 Urban Water Management Plan, this BMP had not been completely developed by the CUWCC. Once this BMP has been completely developed by the CUWCC, then the District will consider implementation of this BMP.

(Table P) Evaluation of Unit Cost of Water That Would Result From Non-Implemented BMPs and Planned Water Supply Project and Programs	
Non-implemented & Not Scheduled BMP / Planned Water Supply Project Name	Per-AF Cost ($)

Cost Effectiveness Summary (Applicable to each item in Table P)	
Total Costs	
Total Benefits	
Discount Rate	
Time Horizon	
Cost of Water ($ per AF)	
Water Savings (AF/YR)	

SECTION VII
WATER SHORTAGE CONTINGENCY PLAN

A. PREPARATION FOR CATASTROPHIC WATER SUPPLY INTERRUPTION

Law

> 10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements that are within the authority of the urban water supplier:
>
> 10632(c). Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

1. Water Shortage Emergency Response

Since the District relies exclusively on groundwater as its source of supply, and is therefore not subject to short term shortages caused by periodic drought, the following projections focus on equipment failure and disaster. The District has developed, with assistance from WMWD, Metropolitan Water District, and the Department of Water Resources, the "Emergency Handbook for Water Supply Managers" using the SEMS (Standard Emergency Management System) framework as specified in Senate Bill 1841.

In the event of a water shortage emergency resulting from equipment failure, power outage, or other catastrophe, the District is prepared to purchase emergency water supplies from both JCSD and WVWD over the time required to effect appropriate repairs or other needed remediation. The District's emergency interconnection with JCSD is currently capable of conveying 800 gpm, and the District plans to expand the capacity of the interconnection in the near future. Additionally, a temporary 800 gpm interconnection with WVWD, which was recently disconnected, may be reconnected during a water shortage emergency. In the event of a water shortage emergency, one MGD is available each from JCSD and WVWD.

The District has also developed a four-stage plan for implementing conservation measures in response to a water shortage, as defined above. The District's plan includes

voluntary and mandatory stages. Water shortage stages and triggering mechanisms for each stage are described in Table 36.

The following table summarizes the actions the water agency will take during a water supply catastrophe.

Table 36
Preparation Actions for a Catastrophe

Possible Catastrophe	Examples of Actions	Check if Discussed
Regional power outage	Determine what constitutes a proclamation of a water shortage.	✓
Earthquake	Stretch existing water storage.	✓
Flood	Obtain additional emergency water supplies.	✓
	Develop alternative water supplies.	✓
	Determine where the funding will come from.	✓
	Contact and coordinate with other agencies.	✓
	Create an Emergency Response Team/Coordinator.	✓
	Create a catastrophe preparedness plan.	✓
	Put employees/contractors on-call.	✓
	Develop methods to communicate with the public.	✓
	Develop methods to prepare for water quality interruptions.	✓

In the event of a regional power outage, the District will use temporary generators to power critical equipment that are not already equipped with backup generators.

In the event of damage to facilities due to an earthquake, temporary facilities will be installed to bypass damaged facilities until such time that damaged facilities can be repaired and placed back online.

During impending flood conditions, potentially affected equipment will be shut down. In the event that facilities are damaged by flooding, temporary facilities will be installed to bypass damaged facilities until such time that damaged facilities can be repaired and placed back online.

B. WATER SHORTAGE CONTINGENCY ORDINANCE/RESOLUTION

Law

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632(h). A draft water shortage contingency resolution or ordinance.

1. Rubidoux Community Services District Water Shortage Response

The District's current rate structure as provided in Ordinance Nos. 96 and 97 includes implementation provisions for the water shortage contingency measures described herein.

C. STAGES OF ACTION

Law

10632. The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

10632(a). Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

1. Rationing Stages and Reduction Goals

The District has developed a four-stage rationing plan (see Table 37) to invoke during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage.

Table 37
Water Rationing Stages and Reduction Goals

Shortage Condition	Stage	Customer Reduction Goal	Type of Rationing Program
25 – 40%	1	15%	Voluntary
40 – 50%	2	25%	Voluntary
50 – 60%	3	30%	Mandatory
60% +	4	40%	Mandatory

2. Priority by Use

The District's priorities for use of available water during a water shortage are:

A. Fire protection, health, and welfare emergency uses.

B. Domestic - interior uses only (residential).

C. Public buildings, schools - interior uses only.

D. Commercial and Industrial - interior uses only.

E. Commercial and Industrial - other uses (not including landscape watering or other nonessential use).

F. Domestic - other uses (including exterior residential use).

3. Health and Safety Requirements

Based on commonly accepted estimates of interior residential water use in the United States, Table 38 indicates per capita health and safety water requirements. In Stage 1 and Stage 2 shortages, customers may adjust either interior or outdoor water use (or both), in order to meet the voluntary water reduction goal.

However, under Stage 3 and Stage 4 mandatory rationing programs, the District has established a health and safety allotment of 68 gpcd (which translates to 33 HCF per person per year), because that amount of water is sufficient for essential interior water with no habit or plumbing fixture changes. If customers wish to change water use habits or plumbing fixtures, 68 gpcd is sufficient to provide for limited non-essential (i.e. outdoor) uses.

Stage IV mandatory rationing, which is likely to be declared only as the result of a prolonged water shortage or as a result of a disaster, would require that customers make changes in their interior water use habits (for instance, not flushing toilets unless "necessary" or taking less frequent showers).

Table 38 Per Capita Health and Safety Water Quantity Calculations						
Non-Conserving Fixtures	**Habit**		**Habit Changes** 1		**Conserving Fixtures** 2	
Toilets	5 flushes x 5.5 gpf	27.5	3 flushes x 5.5 gpf	16.5	5 flushes x 1.6 gpf	8.0
Shower	5 min x 4.0 gpm	20.0	4 min x 3.0 gpm	12.0	5 min x 2.0 gpm	10.0
Washer	12.5 gpcd	12.5	11.5 gpcd	11.5	11.5 gpcd	11.5
Kitchen	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Other	4 gpcd	4.0	4 gpcd	4.0	4 gpcd	4.0
Total (gpcd)		68.0		48.0		37.5
HCF per capita per year		33.0		23.0		18.0
1 Reduced shower use results from shorter and reduced flow. Reduced washer use results from fuller loads. 2 Fixtures include ULF 1.6 gpf toilets, 2.0 gpm showerheads and efficient clothes washers.						

4. Water Shortage Stages and Triggering Mechanisms

The District has a civic and legal responsibility to provide for the water-related health and safety needs of the community. In order to minimize the social and economic impact of water shortages, the District will prudently manage water supplies. This Water Shortage Contingency Plan is designed to provide for a minimum of 60% of normal supply during a severe or extended water shortage. The rationing-program triggering levels outlined below ensure that these policy elements are implemented.

As documented previously, the District's sole water source is ground water. Rationing stages may be triggered by a shortage in aquifer supply, equipment failure, or catastrophe. Because the stages overlap, the triggers will automatically implement the more restrictive stage, unless the District's Board of Directors decides to implement the less restrictive stage. Shortages may trigger a stage at any time. The specific criteria for triggering the District's rationing stages are listed in Table 39.

Table 39 Water Shortage Stages and Triggering Mechanisms				
Percent Reduction of Supply	**Stage 1 25 – 40%**	**Stage 2 40 – 50%**	**Stage 3 50 – 60%**	**Stage 4 60% +**
Water Supply Condition				
Current Supply	Total supply is 85 – 90% of "normal." And Below "normal" year is declared. Or	Total supply is 75 – 85% of "normal." Or Below "normal" year is declared Or	Total supply is 65 – 75% of "normal." Or Fourth consecutive below "normal" year is declared. Or	Total supply is less than 65% of "normal." Or Fifth consecutive below "normal" year is declared. Or
Future Supply	Projected supply insufficient to provide 80% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 75% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 65% of "normal" deliveries for the next two years. Or	Projected supply insufficient to provide 50% of "normal" deliveries for the next two years. Or
Groundwater	No excess groundwater pumping undertaken. Or	First year of excess groundwater pumping taken, must be "replaced" within four years. Or	Second year of excess groundwater pumping taken, must be "replaced" within four years. Or	No excess groundwater pumping available. Or Reduced groundwater pumping due to replenishment of previously pumped groundwater. Or
Water Quality	Contamination of 10% of water supply (exceeds primary drinking water standards)	Contamination of 20% of water supply (exceeds primary drinking water standards)	Contamination of 30% of water supply (exceeds primary drinking water standards)	Or
Disaster Loss				Disaster Loss

5. Water Allotment Methods

The District has established the following allocation method for each customer type. The specific levels are defined in Appendix E.

Single Family: Hybrid of Per-capita and Percentage Reduction. In Mandatory Stages (Stages 3 and 4), the health and safety allotments are determined on a per capita basis; in the less restrictive Voluntary

	Stages (Stages 1 and 2), a percentage reduction is requested from each service.)
Multi-Family:	Hybrid of per capita and percentage reduction
Commercial/ Industrial/Institutional:	Percentage reduction
Landscaping:	Percentage reduction
New Demand:	Hybrid of per capita and percentage reduction, or percentage reduction depending on type of service.

Individual customer allotments will be based on a five-year base period. This gives the District a more accurate view of the usual water needs of each customer and provides additional flexibility in determining allotments and reviewing appeals. However, no allotment will be greater than the amount used in the most recent year of the five-year base period.

The District's General Manager will classify each customer and calculate each customer's allotment according to the methods described in Appendix E. The allotments will reflect seasonal patterns. Each customer will be notified of their classification and allotment by mail before the effective date of the Water Shortage Emergency. New customers and connections will be notified at the time service commences. In a disaster, prior notice of allotment may not be possible. In this case, notice will be provided by other means, such as radio, television, or newspaper. Any customer may appeal the General Manager's classification on the basis of use or the allotment on the basis of incorrect calculation; the appeals process is also set forth in Appendix E.

D. PROHIBITIONS, CONSUMPTION REDUCTION METHODS, AND PENALTIES

Law

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632(d). Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

10632(e). Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

10632(f). Penalties or charges for excessive use, where applicable.

1. Mandatory Prohibitions on Water Wasting

Part 4, Section 3 of the District's Ordinance No. 38 prohibits consumers from permitting leaks or waste of water. To further clarify this prohibition, the District has prepared a Draft No Waste Ordinance (see Appendix D). The Draft No Waste Ordinance includes prohibitions on various wasteful water uses such as lawn watering during mid-day hours, washing sidewalks and driveways with potable water, and allowing plumbing leaks to go uncorrected more than 24 hours after customer notification. District Resolution 657 already directs contractors to use the District's non-potable water wells for all construction purposes.

Table 40
Mandatory Prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Use of potable water to irrigate turf, ground-cover, shrubbery, crops, vegetation, and trees (agricultural accounts are excluded from the time of irrigation restriction) between the hours of 10:00 AM and 6:00 PM, or in such a manner as to result in runoff for more than five (5) minutes.	At all times
Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground, or other hard-surfaced areas.	At all times
Allowing potable water to escape from breaks within the customer's plumbing system for more than twenty-four (24) hours after the customer is notified or discovers the break.	At all times
Washing cars, boats, trailers, aircraft, or other vehicles by hose without a shutoff nozzle and bucket, except to wash such vehicles at commercial or fleet vehicle washing facilities.	At all times
Use of potable water to clean, fill, or maintain decorative fountains, lakes, or ponds, unless such water is recycled.	At all times
No restaurant, hotel, café, cafeteria or other public place where food is sold, served, or offered for sale, shall serve drinking water to any customer unless expressly requested.	During a declared water-shortage emergency
Use of potable water for street or parking lot sweeping or for	During a declared water-shortage emergency

building washdown where non-potable or recycled water is sufficient.	
Use of potable water for sewer system maintenance or fire protection training without prior approval by the General Manager.	During a declared water-shortage emergency
Use of potable water for any purpose in excess of the amounts allocated for each class of service.	During a declared water shortage emergency

Table 41
Consumption Reduction Methods

Consumption Reduction Method	Stage When Method Takes Effect
Demand reduction program	All Stages
Reduce pressure in water lines	4
Flow restriction	4
Restrict building permits	2, 3, 4
Restrict for only priority uses	4
Use prohibitions	All Stages
Water shortage pricing	All Stages
Per capita allotment by customer type	4
Plumbing fixture replacement	All Stages
Voluntary rationing	1
Mandatory rationing	2, 3, 4
Incentives to reduce water consumption	1,2
Education Program	All Stages
Percentage reduction by customer type	2, 3, 4
Use non-potable water for construction purposes	All Stages

See Appendix D, the Draft No Waste Ordinance and Moratorium on New Connections, which details the reduction methods shown in Table 41.

2. Excessive Use Penalties

The District's current rate structure is provided in Ordinance Nos. 96 and 97, which are incorporated herein by reference and are available for review at the District's office. During any declared Water Shortage Emergency, a customer who exceeds the established allotment will pay a surcharge of two times the highest rate tier per hundred cubic feet (ccf) of water for excess water delivered during the first or second billing period of the declared water shortage emergency, and a surcharge of four times the highest rate tier per ccf for excess water delivered during the third and subsequent consecutive billing periods of the declared water shortage emergency.

As used herein, "excess water" means the amount of water delivered in excess of the specific customer's established allotment during any billing period; however, if a customer's total annual usage is equal to or less than the annual allotment, any surcharge payments will be refunded to the customer. A similar adjustment will be made for each successive twelve-month period during the term of the rationing program; if the program is terminated prior to a full twelve-month term, the adjustment will be pro rated.

If a customer exceeds the allotted usage for three consecutive billing periods, the District will install a flow restrictor at the service meter with a capacity of two gpm for meters up to one and one-half inch size, and comparatively sized restrictors for larger meters, for a period of seven days. The customer must pay a flow restrictor installation and removal charge of $100 before normal service will be restored.

Service may be terminated to any customer who knowingly and willfully violates any of the provisions included in this chapter of the Urban Water Management Plan.

Table 42 Penalties and Charges	
Penalty or Charge	**Stage When Penalty Takes Effect**
A surcharge of two times the highest rate tier per 100 cubic feet of water delivered in excess of the customer's specified allotment.	During any Declared Water Shortage Emergency, during the first or second billing period in which the customer exceeds the allotted usage
A surcharge of four times the highest rate tier per 100 cubic feet of water delivered in excess of the customer's specified allotment.	During any Declared Water Shortage Emergency, during the third and subsequent billing periods in which the customer exceeds the allotted usage
The District will install a flow restrictor at the service meter with a capacity of two gpm for meters up to one and one-half inch size, and comparatively sized restrictors for larger meters, for a period of seven days. The customer must pay a flow restrictor installation and removal charge of $100 before normal service will be restored.	When a customer exceeds allotted usage for three consecutive billing periods
Service may be terminated.	When a customer knowingly and willfully violates any of the provisions included in the Water Shortage Contingency Plan

E. REVENUE AND EXPENDITURE IMPACTS AND MEASURES TO OVERCOME IMPACTS

Law

> 10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:
>
> 10632(g). An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

The District's normal annual income from water sales is approximately $2,350,000. Surplus revenues are placed in the District's reserve, which is used to fund emergency repairs and water system capital improvements.

The District maintains a financial reserve that is adequate to address the costs of multiple plant repairs. The District projects no actual impact on water sales due to shortages, and is adequately funded to respond to emergencies.

Table 43 Actions and Conditions that Impact Revenues	
Type	**Anticipated revenue reduction**
Reduced sales	Minimum revenue reduction
Environmental	Minimum revenue reduction
Natural Disaster	Minimum revenue reduction
Terrorism	Minimum revenue reduction

Table 44 Actions and Conditions that Impact Expenditures	
Category	**Anticipated cost**
Increased staff cost	Controlled cost
Increased O&M cost	Decrease in revenue
Increased cost of supply & treatment	Decrease in reserve fund

Table 45 Proposed Measures to Overcome Revenue Impacts	
Names of measures	**Summary of Effects**
Rate adjustment	Increased revenue
Development of reserves	RCSD has a reserve fund
FEMA	Funding assistance during a disaster

Table 46 Proposed Measures to Overcome Expenditure Impacts	
Names of measures	**Summary of Effects**
Increased revenue	Reduced sales
Loan payments	Revenue loss
FEMA	Loan payments

F. REDUCTION MEASURING MECHANISM

Law

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632(i). A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

1. Mechanism to Determine Reductions in Water Use

a. Normal Monitoring Procedure

In normal water supply conditions, production figures are recorded daily in the District's computerized database. Total production and consumption by all categories of customers are reported monthly to District management and the Board of Directors.

b. Stage 1 and 2 Water Shortages

During a Stage 1 or 2 water shortage, daily production figures will be reported to the Operations Manager, who will compare the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports will be forwarded to the General Manager.

c. Water Shortage Response Team

Monthly reports will be provided to the Board of Directors and to the Customer Accounts Department; the latter will serve as the District's Water Shortage Response Team. If reduction goals are not met, the Water Shortage Response Team will examine individual customer usages, and corrective action will be taken.

d. Stage 3 and 4 Water Shortages

During a Stage 3 or 4 water shortage, the procedure listed above will be followed, with the addition of a daily production report to the General Manager.

e. Disaster Shortage

During a disaster shortage, production figures will be reported to the Operations Manager hourly, and to the General Manager and the Water Shortage Response Team daily.

SECTION VIII
WATER RECYCLING

A. WASTEWATER SYSTEM DESCRIPTION

Law

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

> 10633(a) A description of the wastewater collection and treatment systems in the supplier's service area…

1. City of Riverside

Pursuant to an agreement with the City of Riverside to provide advanced wastewater treatment dated December 1, 1976 and a subsequent agreement with the City of Riverside to provide primary and secondary wastewater treatment dated May 4, 1978, the District has discontinued treatment of the wastewater it collects from within its service area. All wastewater collected by the District is conveyed through regional wastewater conveyance facilities (trunk sewers, lift station, and force main) to the City of Riverside Regional Wastewater Treatment Plant. Since said facility is located downstream of the District and on the opposite side of the Santa Ana River, it is not currently possible to purvey reclaimed water within the District's boundary.

B. WASTEWATER GENERATION, COLLECTION, AND TREATMENT

Law

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

> 10633(a). A […] quantification of the amount of wastewater collected and treated…

The District currently collects and conveys approximately 2.10 MGD of wastewater from its service area to the City of Riverside Regional Wastewater Treatment Plant. Wastewater Conveyed to the treatment plant undergoes primary, secondary, and tertiary treatment prior to being discharged to the Santa Ana River. The plant treats an average of 32 MGD of wastewater.

C. WASTEWATER DISPOSAL AND RECYCLED WATER USES

Law

> 10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:
>
> > 10633(a). A description of the […] methods of wastewater disposal.
> >
> > 10633(b). A description of the recycled water currently being used in the supplier's service area, including but not limited to, the type, place and quantity of use.
> >
> > 10633(c). A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
> >
> > 10633(d). The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

1. Recycled Water Currently Being Used

Recycled water is currently unavailable in RCSD's service area.

2. Potential Uses of Recycled Water

The list of types of use for which reclaimed water is approved within California is continuing to grow as the value of wastewater reclamation as a reliable water resource is being more widely recognized. The California Department of Health Services, which is

responsible for Title 22 of the California Administrative Code and which establishes wastewater reclamation, is nearing the end of a multi-year process to update the regulations. Many agencies throughout the state of California have been looking for new areas in which to beneficially use reclaimed water. Historically, both the regulatory agencies and the agencies operating reclaimed water systems have addressed controlled irrigation use as the primary use for reclaimed water. More recently, both have recognized the safety and benefit of industrial uses such as process water and cooling tower makeup water, commercial uses such as flushing of toilets in commercial buildings, and widened irrigation uses such as for raw edible food crops, and landscape irrigation under individual homeowner control. A number of MWD member agencies or subagencies have successfully implemented these types of uses in the recent past with the approval of the state and local regulatory agencies.

The bulk of potential uses fall into landscape irrigation such as medians, freeway landscape, schools, cemeteries, and parks. Equestrian properties may also have a potential use for recycled water.

All wastewater collected by the District is conveyed through regional wastewater conveyance facilities (trunk sewer, lift station, and force main) to the City of Riverside Regional Wastewater Treatment Plant. Since said facility is located downstream of the District and on the opposite side of the Santa Ana River, it is not currently possible to purvey reclaimed water within the District's boundary. Conveyance of recycled water to RCSD's service area has been deemed cost prohibitive, as costly conveyance facilities would have to be constructed. The availability of recycled water in RCSD's service area is not anticipated over the next 25 years. Because of this, no potential uses of recycled water in RCSD's service area are discussed in this plan.

D. ENCOURAGING RECYCLED WATER USE

Law

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area and shall include all of the following:

> 10633(e). A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

Recycled water is currently unavailable in the District's service area.

All wastewater collected by the District is conveyed through regional wastewater conveyance facilities (trunk sewer, lift station, and force main) to the City of Riverside Regional Wastewater Treatment Plant. Since said facility is located downstream of the District and on the opposite side of the Santa Ana River, it is not currently possible to purvey reclaimed water within the District's boundary. In order to convey recycled water to RCSD's service area, conveyance facilities would have to be constructed. Because of this, the use of recycled water in RCSD's service area is cost prohibitive at this time. The availability of recycled water in RCSD's service area is not anticipated over the next 25 years; therefore, the use of recycled water is not currently being encouraged in RCSD's service area.

E. Recycled Water Optimization Plan

Law

> 10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:
>
> > 10633(f). A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Recycled water is currently unavailable in the District's service area. All wastewater collected by the District is conveyed through regional wastewater conveyance facilities (trunk sewer, lift station, and force main) to the City of Riverside Regional Wastewater Treatment Plant. Since said facility is located downstream of the District and on the opposite side of the Santa Ana River, it is not currently possible to purvey reclaimed water within the District's boundary. In order to convey recycled water to RCSD's service area, conveyance facilities would have to be constructed. The availability of recycled water in RCSD's service area is not anticipated over the next 25 years. Because of this, the use of recycled water in RCSD's service area is cost prohibitive at this time; therefore, RCSD has not included a Recycled Water Optimization Plan in this plan.

LIST OF GROUPS WHO PARTICIPATED IN THE DEVELOPMENT OF THIS PLAN

Table 47
Participating Agencies

Participating agencies	Role in Plan Development
Western Municipal Water District	Provided copies of their Draft and Final 2005 UWMP
Metropolitan Water District	Provided copies of their Draft and Final 2005 UWMP
RCSD Board of Directors	Reviewed and adopted RCSD's 2005 UWMP
Members of the public	Reviewed Draft 2005 UWMP and provided comments at public hearing

RESOLUTION NO. ____

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT,
RIVERSIDE COUNTY, CALIFORNIA,
ADOPTING THE 2005 URBAN WATER MANAGEMENT PLAN

WHEREAS the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS the District is an urban supplier of water providing water to a population over 31,000 and

WHEREAS the Plan shall be periodically reviewed at least once every five years, and that the District shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS the Plan must be adopted by the Board of Directors, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS, District staff has, therefore, prepared and made available to the public for inspection a proposed Urban Water Management Plan dated March 2006, in compliance with the requirements contained in Part 2.6 of Division 6 of the Water Code of the State of California; and

WHEREAS, the aforesaid plan is entitled "Rubidoux Community Services District 2005 Urban Water Management Plan";

WHEREAS, this Board of Directors duly called and noticed a public hearing on the aforesaid plan to be held on _____, at the hour of ____ PM; and

WHEREAS, a Notice of Hearing was duly published pursuant to Section 6066 of the Government Code of the State of California; and

WHEREAS, the aforesaid hearing called by the Board of Directors has been duly held and concluded; and

NOW, THEREFORE, BE IT RESOLVED AND ORDERED by this Board of Directors, as follows:

Section 1. That all the foregoing is true and correct.

Section 2. That the aforesaid Rubidoux Community Services District 2005 Urban Water Management Plan is hereby adopted.

ADOPTED this 21st day of March, 2006.

_____

President of the Rubidoux Community Services District and of the Board of Directors thereof.

_____

Secretary of the Rubidoux Community Services District and of the Board of Directors thereof.

(SEAL)

NO WASTE ORDINANCE (DRAFT)

RUBIDOUX COMMUNITY SERVICES DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
Date

The District Board of Directors of the Rubidoux Community Services District does hereby resolve as follows:

PROHIBITING WASTEFUL USE OF WATER

REGULATIONS AND RESTRICTIONS ON WATER USE

It is hereby resolved by the District Board of Directors that in order to conserve the District's water supply for the greatest public benefit, and to reduce the quantity of water used by the District's customers, that wasteful use of water should be eliminated. Customers of the District shall observe the following regulations and restrictions on water use:

1. No customer shall waste water. As used herein, the term "waste" means:

    a. Use of potable water to irrigate turf, ground-cover, shrubbery, crops, vegetation, and trees (agricultural accounts are excluded from the time of irrigation restriction) between the hours of 10:00 o'clock A.M. and 6:00 o'clock P.M. or in such a manner as to result in runoff for more than five (5) minutes;
    b. Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas except where necessary for public health or safety;
    c. Allowing potable water to escape from breaks within the customer's plumbing system for more than twenty-four (24) hours after the customer is notified or discovers the break;
    d. Washing cars, boats, trailers, aircraft, or other vehicles by hose without a shutoff nozzle and bucket except to wash such vehicles at commercial or fleet vehicle washing facilities using water recycling equipment.
    e. Use of potable water to clean, fill or maintain decorative fountains, lakes or ponds unless such water is recycled.

2. The following restrictions are effective during a declared Water-Shortage Emergency.

    a. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless expressly requested.
    b. Use of potable water for street or parking lot sweeping, building washdown where non-potable or recycled water is sufficient.
    c. Use of potable water for sewer system maintenance or fire protection training without prior approval by the General Manager;
    d. Use of potable water for any purpose in excess of the amounts allocated for each class of service.

3. Other restrictions may be necessary during a declared Water Shortage Emergency, to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

ENFORCEMENT

Any customer violating the regulations and restrictions on water use set forth in this chapter shall receive a written warning for the first such violation. Upon a second violation, the customer shall receive a written warning and the district may cause a flow-restrictor to be installed in the service. If a flow-restrictor is placed, the cost of installation and removal shall be paid by the violator. Any willful violation occurring subsequent to the issuance of the second written warning shall constitute a misdemeanor and may be referred to the County District Attorney's Office for prosecution. The district may also disconnect the water service. If water service is disconnected, it shall be restored only upon payment of the turn-on charge fixed by the Board of Directors.

PENALTY FOR VIOLATIONS

Except as provided in the enforcement section for the first and second violations any person, firm, partnership, association, corporation or political entity violating or causing or permitting the violation of any of the provisions of this section or providing false information to the district in response to district's requests for information needed by the district to calculate consumer water allotments shall be guilty of a misdemeanor punishable by imprisonment in the county jail for not more that thirty days or by a fine not exceeding one thousand dollars or both. Each separate day or portion thereof in which any violation occurs or continues without a good faith effort by the responsible party to correct the violation shall constitute a separate offense and, upon conviction thereof, shall be separately punishable.

APPEALS

Variances from the requirements of this Section may be granted by the Board of Directors only after denial of a variance request by the general manager. Appeals of variance request denials shall be made in writing to the secretary of the Board at least 2 weeks prior to the meeting at which they will be heard.. Upon granting any appeal, the Board of directors may impose any conditions it determines to be just and proper. Variances granted by the Board shall be prepared in writing, the furnished to the applicant. The board of Directors may require it to be recorded at applicant's expense.

REMEDIES/CUMULATIVE

The remedies available to the district to enforce this ordinance are in addition to any other remedies available under the district's code or any state statutes or regulations, and do not replace or supplant any other remedy, but are cumulative.

RESOLUTION TO DECLARE A WATER SHORTAGE EMERGENCY (DRAFT)

RUBIDOUX COMMUNITY SERVICES DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
Date

The District Board of Directors of the Rubidoux Community Services District does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Board has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS, the Board finds, determines and declares as follows:

(a) The District is the water purveyor for the property owners and inhabitants of Rubidoux;
(b) The demand for water service is not expected to lessen.
(c) When the combined total amount of water supply available to the District from all sources falls at or below the Stage 3 triggering levels described in the 2005 Urban Water Management Plan, the District will declare a water shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers without depleting the District's water supply to the extent that there may be insufficient water for human consumption, sanitation, fire protection, and environmental requirements. This condition is likely to exist until precipitation and inflow dramatically increases or until water system damage resulting from a disaster are repaired and normal water service is restored.

NOW, THEREFORE, BE IT RESOLVED that the District Board of Directors of the Rubidoux Community Services District hereby directs the General Manager to find, determine, declare and conclude that a water shortage emergency condition exists that threatens the adequacy of water supply, until the District's water supply is deemed adequate. After the declaration of a water shortage emergency, the General Manager is directed to determine the appropriate Rationing Stage and implement the District's Water Shortage Emergency Response.

FURTHERMORE, the Board shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

MORATORIUM ON NEW CONNECTIONS DURING A WATER SHORTAGE (DRAFT)

RUBIDOUX COMMUNITY SERVICES DISTRICT
RIVERSIDE COUNTY, CALIFORNIA

Date

The District Board of Directors of the Rubidoux Community Services District does hereby resolve as follows:

The Municipal Code of the Rubidoux Community Services District is hereby amended to read as follows:

XX-1 MORATORIUM ON SERVICE COMMITMENTS AND CONNECTIONS

1. When the District declares a water shortage emergency, the following regulations shall become effective immediately and shall continue in full force and effect to prohibit the following while it remains in full force and effect:

    a. The District shall not issue oral or written commitments to provide new or expanded water service, including will-serve letters.
    b. The District shall not sell meters for water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments, unless building permits have been issued.
    c. The District shall not provide new or expanded water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments and meters, unless building permits have been issued.
    d. The District shall not provide water for use on any new plantings installed after the declaration of a Water Shortage Emergency.
    e. The District shall not annex territory located outside the District's service boundary.

2. The following uses are exempt from the moratorium and upon application to the District shall receive necessary water service commitments and connections to receive water from the District:

    a. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a building permit has been issued by the District on or before the declaration of a Water Shortage Emergency.
    b. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a retail meter had been purchased from the District before the declaration of a Water Shortage Emergency, as evidenced by a written receipt and for which a building permit has been issued and remains in full force and effect.
    c. Publicly owned and operated facilities, including but not limited to schools, fire stations, police stations, and hospitals and other facilities as necessary to protect the public health, safety and welfare.

RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER SHORTAGE CONTINGENCIES
CUSTOMER ALLOTMENTS AND APPEALS PROCEDURE

The following is the Rubidoux Community Services District's (District) rationing allocation method (arranged by customer type and stage) and the appeals procedure. It should be noted that the allotment figures indicated in Stages 3 and 4 are given in terms of hundred cubic feet (ccf), which is the standard measurement for water deliveries and is indicated on the District's water bills and water meters; 1 ccf is equivalent to 748 gallons of water. The minimum water allotment for residential customers is based on a minimum quantity that is required for health and safety needs (e.g. drinking, personal hygiene); the District has established said minimum quantity as 68 gallons per capita per day (gpcd).

Stage 1: Minimal shortage (25 to 40 percent)

Stage 2: Moderate shortage (40 to 50 percent)

In the event that a minimal or moderate water shortage occurs, the District will implement the voluntary measures outlined below.

1. All customers will be notified of the water shortage.

2. Information will be mailed to every customer which will explain the importance of significant water use reductions.

3. Technical information will be provided to the District's customers regarding methods for improving water use efficiency.

4. The District will conduct media campaign to remind consumers of the need to save water.

5. The District will publicize and expand appliances and fixtures efficiency programs.

Stage 3: Severe shortage (50 to 60 percent)

Stage 4: Critical shortage (60+ percent)

In the event that a severe or critical water shortage occurs, the District will establish mandatory annual allotments for each connection based on average use during a three-year base period that will supplement the voluntary measures outlined above; said base period will be selected by the Water Shortage Response Team.

1. Each single-family residential connection will receive no more than 103 ccf per year (68 gpcd minimum water requirement x 3.1 persons per household x 365 days = 76,942 gallons – 748 = 103 ccf) plus 20% of average annual usage in excess of 103 ccf.

2. Each multi-family residential connection will receive no more than 76 ccf per year (68 gpcd minimum water requirement x 2.3 persons per dwelling unit x 365 days = 57,086 gallons – 748 = 76 ccf) per dwelling unit plus 20% of average annual usage in excess of 76 ccf.

3. Each commercial, industrial, and governmental connection will receive no more than 70% of average annual usage.

4. Each landscaping connection will receive 20% of average annual usage, unless the specific account has been determined by District staff to meet the District's Landscape Guidelines for xeriscape design, irrigation, and maintenance, in which case it will receive 70% of average annual usage.

5. No meters will be installed for new accounts during the declared water shortage emergency.

Appeals Procedure

1. Any person who wishes to appeal their customer classification or allotment must do so in writing, using forms provided by the District.

2. Appeals will be reviewed by the Water Shortage Response Team; site visits will be scheduled if required.

3. One of the conditions of approval will be that all applicable plumbing fixtures or irrigation systems be replaced or modified for maximum water conservation.

4. Increased allotments may be approved for the following:

   a. Substantial medical requirements.

   b. Residential connections with four or more residents in a single-family household, or three or more residents per unit in a multi-family residence. These connections can receive additional allotments based upon the same calculations used for the standards applied in Stages 3 and 4 per additional person. During a Stage 4 shortage, a census may be conducted to determine the actual number of residents per dwelling unit. Additional water will be approved for permanent residents only; permanent residents are defined as people who live in the specific residence a minimum of five days per week, nine months per year.

   c. Commercial/Industrial customers for which water supply reductions will result in unemployment or decreased production; a District water auditor must first confirm that the customer has instituted all applicable water efficiency improvements.

   d. Non-agricultural customers can appeal for an additional allotment 12 ccf per year per horse, cow, or other large animal, and 6 ccf per year for each efficiently irrigated mature fruit tree.

   e. Government agencies (parks, schools, county, etc.) may have separate account allotments combined into one "agency" allotment.

5. In the event that an appeal for an additional allotment is requested for irrigation of trees or vegetation in residential categories or for any agricultural use, District staff may use the services of a qualified consultant in determining the validity of the request.

6. The Water Shortage Response Team will approve or deny appeals and report all appeals to the District's Board of Directors monthly.

7. If the Water Shortage Response Team and the applicant are unable to reach agreement, the appeal will then be heard by the District's General Manager, who will make the final determination.

8. All appeals will be reported monthly to the District's Board of Directors as a part of the Water Supply Report.

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